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NEWS 2	Sep 29	The Philippines Inventory of Chemicals and Chemical Substances (PICCS) has been added to CHEMLIST
NEWS 3	Oct 27	New Extraction Code PAX now available in Derwent Files
NEWS 4	Oct 27	SET ABBREVIATIONS and SET PLURALS extended in Derwent World Patents Index files
NEWS 5	Oct 27	Patent Assignee Code Dictionary now available in Derwent Patent Files
NEWS 6	Oct 27	Plasdoc Key Serials Dictionary and Echoing added to Derwent Subscriber Files WPIDS and WPIX
NEWS 7	Nov 29	Derwent announces further increase in updates for DWPI
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NEWS 9	Dec 5	Trademarks on STN - New DEMAS and EUMAS Files
NEWS 10	Dec 15	2001 STN Pricing
NEWS 11	Dec 17	Merged CEABA-VTB for chemical engineering and biotechnology
NEWS 12	Dec 17	Corrosion Abstracts on STN
NEWS 13	Dec 17	SYNTHLINE from Prous Science now available on STN
NEWS 14	Dec 17	The CA Lexicon available in the CAPLUS and CA files
NEWS 15	Jan 05	AIDSLINE is being removed from STN
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FILE 'HOME' ENTERED AT 12:43:11 ON 24 JAN 2001

=> file medline embase biosis scisearch caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.15	0.15

FILE 'MEDLINE' ENTERED AT 12:43:32 ON 24 JAN 2001

FILE 'EMBASE' ENTERED AT 12:43:32 ON 24 JAN 2001

FILE 'BIOSIS' ENTERED AT 12:43:32 ON 24 JAN 2001

FILE 'SCISEARCH' ENTERED AT 12:43:32 ON 24 JAN 2001

FILE 'CAPLUS' ENTERED AT 12:43:32 ON 24 JAN 2001

=> s avian antibody

L1 108 AVIAN ANTIBODY

=> s l1 and Escherichia coli H7 strain

L2 0 L1 AND ESCHERICHIA COLI H7 STRAIN

=> s l1 and E coli

L3 0 L1 AND E COLI

=> s l1 and anaerobacteria

L4 0 L1 AND ANAEROBACTERIA

=> s l1 and peptostriptoccus anaerobius

L5 0 L1 AND PEPTOSTRIPTOCCUS ANAEROBIUS

=> s l1 and bacteria

L6 2 L1 AND BACTERIA

=> d l6

L6 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1998:262100 BIOSIS
DN PREV199800262100
TI Antibodies to recombinant Clostridium difficile toxins A and B are an effective treatment and prevent relapse of C. difficile-associated disease in a hamster model of infection.
AU Kink, John A. (1); Williams, Jim A.
CS (1) Ophidian Pharmaceuticals Inc., 5445 East Cheryl Pkwy., Madison, WI 53711 USA
SO Infection and Immunity, (May, 1998) Vol. 66, No. 5, pp. 2018-2025. ISSN: 0019-9567.
DT Article
LA English

=> d l6 all 1-2

L6 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2001 BIOSIS
AN 1998:262100 BIOSIS
DN PREV199800262100
TI Antibodies to recombinant Clostridium difficile toxins A and B are an effective treatment and prevent relapse of C. difficile-associated disease in a hamster model of infection.
AU Kink, John A. (1); Williams, Jim A.
CS (1) Ophidian Pharmaceuticals Inc., 5445 East Cheryl Pkwy., Madison, WI 53711 USA
SO Infection and Immunity, (May, 1998) Vol. 66, No. 5, pp. 2018-2025. ISSN: 0019-9567.
DT Article
LA English
AB Clostridium difficile causes antibiotic-associated diarrhea and colitis in humans through the actions of toxin A and toxin B on the colonic mucosa. At present, broad-spectrum antibiotic drugs are used to treat this disease, and patients suffer from high relapse rates after termination of treatment. This study examined the role of both toxins in pathogenesis and the ability of orally administered **avian antibodies** against recombinant epitopes of toxin A and toxin B to treat C difficile-associated disease (CDAD). DNA fragments representing the entire gene of each toxin were cloned, expressed, and affinity purified. Hens were immunized with these purified recombinant-protein fragments of toxin A and toxin B. Toxin-neutralizing antibodies fractionated from egg yolks were evaluated by a toxin neutralization assay in Syrian hamsters. The carboxy-terminal region of each toxin was most effective in generating toxin-neutralizing antibodies. With a hamster infection model, antibodies to both toxins A and B (CDAD antitoxin) were required to prevent morbidity and mortality from infection. In contrast to vancomycin, CDAD antitoxin prevented relapse and subsequent C. difficile reinfection in the hamsters. These results indicate that CDAD antitoxin may be effective in the treatment and management of CDAD in humans.
CC Pharmacology - Immunological Processes and Allergy *22018
Biochemical Studies - Proteins, Peptides and Amino Acids *10064
Biochemical Studies - Carbohydrates *10068
Toxicology - General; Methods and Experimental *22501
Physiology and Biochemistry of Bacteria *31000
Immunology and Immunochemistry - General; Methods *34502
Immunology and Immunochemistry - Bacterial, Viral and Fungal *34504
Medical and Clinical Microbiology - Bacteriology *36002
BC Endospore-forming Gram-Positives 07810
IT Major Concepts
Immune System (Chemical Coordination and Homeostasis); Pharmacology
IT Chemicals & Biochemicals
anti-Clostridium difficile toxin A antibody: immunostimulant - drug; anti-Clostridium difficile toxin B antibody: immunostimulant - drug; recombinant Clostridium difficile toxin A; recombinant Clostridium

difficile toxin B
IT Methods & Equipment
in vitro toxin neutralization assay
ORGN Super Taxa
Endospore-forming Gram-Positives: Eubacteria, **Bacteria**, Microorganisms
ORGN Organism Name
Clostridium-difficile (Endospore-forming Gram-Positives): pathogen
ORGN Organism Superterms
Bacteria; Eubacteria; Microorganisms

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2001 ACS
AN 1998:635674 CAPLUS
DN 129:259335
TI Use of **avian antibodies**
IN Larsson, Anders; Kollberg, Hans
PA Immunsystem Ims AB, Swed.
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K039-40
ICS C07K016-02
CC 15-3 (Immunochemistry)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9841235	A1	19980924	WO 1998-SE526	19980320
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
SE 9701212	A	19980921	SE 1997-1212	19970403
SE 511993	C2	20000110		
AU 9865312	A1	19981012	AU 1998-65312	19980320
EP 971741	A1	20000119	EP 1998-911344	19980320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9808392	A	20000523	BR 1998-8392	19980320
PRAI SE 1997-1026	19970320			
WO 1998-SE526	19980320			

AB The present invention relates to use of **avian antibodies** and/or antigen binding fragments thereof, for the prodn. of a drug for treatment and/or prevention of respiratory tract infections. The infection is bacterial, viral or fungal. The drug is administered through
local application at the oral cavity and/or pharynx. Antibodies against Pseudomonas aeruginosa was prepd. in and purified from domestic hens for treating Pseudomonas infection.
ST **avian antibody** respiratory tract infection
IT Bacterial infection
Bird (Aves)
Lymph
Mouthwashes

Mycosis
Oral drug delivery systems
Pharynx
Pseudomonas
Pseudomonas aeruginosa
Pulmonary infection
Respiratory tract infection
Viral infection
(**avian antibodies** for treating respiratory tract infection by **bacteria** or virus or fungus)

IT Antibodies
RL: BPN (Biosynthetic preparation); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**avian antibodies** for treating respiratory tract infection by **bacteria** or virus or fungus)

IT Antigens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**avian antibodies** for treating respiratory tract infection by **bacteria** or virus or fungus)

IT Chicken (Gallus domesticus)
(domestic hens; **avian antibodies** for treating respiratory tract infection by **bacteria** or virus or fungus)

IT Bronchial diseases
(infection; **avian antibodies** for treating respiratory tract infection by **bacteria** or virus or fungus)

IT Pharynx
(oropharynx; **avian antibodies** for treating respiratory tract infection by **bacteria** or virus or fungus)

=> d his

(FILE 'HOME' ENTERED AT 12:43:11 ON 24 JAN 2001)

FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS' ENTERED AT 12:43:32 ON 24 JAN 2001

L1 108 S AVIAN ANTIBODY
L2 0 S L1 AND ESCHERICHIA COLI H7 STRAIN
L3 0 S L1 AND E COLI
L4 0 S L1 AND ANAEROBACTERIA
L5 0 S L1 AND PEPTOSTRIPTOCCUS ANAEROBIUS
L6 2 S L1 AND BACTERIA

=> s l1 and ruminal bacteria

L7 0 L1 AND RUMINAL BACTERIA

=> s E coli H7

L8 17 E COLI H7

=> dup remove l8

PROCESSING COMPLETED FOR L8
L9 6 DUP REMOVE L8 (11 DUPLICATES REMOVED)

=> d l9 all 1-6

L9 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2001 ACS
AN 1998:207285 CAPLUS
DN 128:228232
TI Motility channel pathogen detector and method of use
IN Wun, Chun Kwun; Torre, Frank J.
PA Springfield College, USA
SO U.S., 9 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM G01N033-567
NCL 435007210
CC 9-1 (Biochemical Methods)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5733736	A	19980331	US 1996-767165	19961216
	WO 9827431	A1	19980625	WO 1997-US14156	19970827
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9742299	A1	19980715	AU 1997-42299	19970827
	EP 956505	A1	19991117	EP 1997-940548	19970827
	R: CH, DE, FR, GB, LI, NL				
PRAI	US 1996-767165		19961216		
	WO 1997-US14156		19970827		

AB A motility channel pathogen detector and method of use of the detector are disclosed for detecting a target motile pathogen in a test sample of potential pathogens. The motility channel pathogen detector includes: a dish having a base and walls arising from the base to define a motility channel; an anti-serum end of the motility channel; an inoculation end of the motility channel opposed to the anti-serum end; and opposed channel walls that cooperate to define the motility channel between the anti-serum and inoculation ends of the channel. A growth medium is positioned in the motility channel and an anti-serum that biol. interacts with the target motile pathogen is positioned in the growth medium in the anti-serum end so that the anti-serum diffuses in the growth medium to form an anti-serum front between the channel walls. The sample of potential pathogens is inoculated in the growth medium adjacent the inoculation end so that any target motile pathogen moves towards, contacts and accumulates at the anti-serum front to form a visible detection line adjacent the anti-serum front. In one embodiment the target motile pathogen is a serotype of Escherichia coli bacteria generally known as "E. coli 0157:H7", and the anti-serum is **E. coli H7** anti-serum which restricts motility of the pathogen.

ST motility channel pathogen detector

IT Peptones
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Proteose; motility channel pathogen detector and method of use)
IT Antiserums
Culture media
Escherichia coli
Pathogenic microorganism
Sensors
(motility channel pathogen detector and method of use)
IT 56-45-1, L-Serine, biological studies 60-00-4, Edta, biological studies 63-68-3, L-Methionine, biological studies 302-95-4, Sodium deoxycholate 7487-88-9, Magnesium sulfate, biological studies 7790-58-1, Potassium tellurite 9002-18-0, Agar 16068-46-5, Potassium phosphate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(motility channel pathogen detector and method of use)

L9 ANSWER 2 OF 6 MEDLINE DUPLICATE 1
AN 97193822 MEDLINE
DN 97193822
TI Use of the flagellar H7 gene as a target in multiplex PCR assays and improved specificity in identification of enterohemorrhagic Escherichia coli strains.
AU Gannon V P; D'Souza S; Graham T; King R K; Rahn K; Read S
CS Animal Diseases Research Institute, Agriculture and Agri-Food Canada, Lethbridge, Alberta, Canada.. gannonv@em.agr.ca
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1997 Mar) 35 (3) 656-62.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-L07338; GENBANK-U47614
EM 199708
EW 19970801
AB PCR products of 1.8 kb were generated with DNAs from all Escherichia coli H7 strains tested by using oligonucleotide primers which flank the fliC gene. Three RsaI digestion profiles of these PCR products were evident on agarose gels; the first occurred with serotype O55:H7, O157:H7, or nonmotile (NM) strains, the second occurred with serotype O1:H7 and O18:H7
strains, and the third occurred with serotype O?:H7, O19:H7, O121:H7, O88:H7, and O156:H7 strains. Despite these differences, the nucleotide sequences of the E. coli E32511 (O157:NM) and U5-41 (O1:H7) fliC genes were 97% homologous. Two PCR primer pairs synthesized on the basis of the E32511 H7 fliC sequence amplified specific DNA fragments from all **E. coli H7** strains, but did not amplify DNA
fragments from the other bacterial strains. The H7-specific primers were used in combination with other primers which target the Verotoxin 1(VT1) and VT2 genes and the E. coli O157:H7 eaeA gene in multiplex PCR assays. In these assays, vt and eaeA PCR products were observed with DNAs from the
majority of EHEC strains and vt, eaeA, and fliC PCR products were observed
with DNAs from E. coli O157:H7 or NM strains. Only eaeA PCR products were present with DNA from enteropathogenic E. coli, and only vt PCR products occurred with VT-producing E. coli which are not EHEC. The multiplex PCR

assays described allow for the specific identification of E. coli O157:H7 or NM and other EHEC strains.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't
Bacterial Outer Membrane Proteins: GE, genetics
Bacterial Toxins: GE, genetics
Base Sequence
DNA Primers: GE, genetics
DNA, Bacterial: GE, genetics
Escherichia coli: CL, classification
*Escherichia coli: GE, genetics
Escherichia coli: IP, isolation & purification
Escherichia coli Infections: MI, microbiology
Escherichia coli O157: CL, classification
Escherichia coli O157: GE, genetics
Escherichia coli O157: IP, isolation & purification
*Flagella: GE, genetics
Flagellin: GE, genetics
*Genes, Bacterial
Molecular Sequence Data
*Polymerase Chain Reaction: MT, methods
Polymerase Chain Reaction: SN, statistics & numerical data
Sensitivity and Specificity
Sequence Homology, Nucleic Acid
Serotyping

RN 12777-81-0 (Flagellin); 147094-99-3 (eae protein); 156066-56-7 (FlaC protein)

CN 0 (Bacterial Outer Membrane Proteins); 0 (Bacterial Toxins); 0 (DNA Primers); 0 (DNA, Bacterial); 0 (Shiga-like toxin I); 0 (Shiga-like toxin II)

L9 ANSWER 3 OF 6 MEDLINE DUPLICATE 2

AN 97335329 MEDLINE

DN 97335329

TI Variation in manifestation of **E. coli H7** antigen.

AU Bailey C W; Carson C A

CS WHO Collaborating Center for Enteric Zoonoses, College of Veterinary Medicine, University of Missouri, Columbia 65211, USA.

SO ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY, (1997) 412 83-5. Journal code: 2LU. ISSN: 0065-2598.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 199710

EW 19971005

CT Check Tags: Support, Non-U.S. Gov't
DNA Primers
*Escherichia coli O157: GE, genetics
Escherichia coli O157: IM, immunology
*Flagellin: GE, genetics
Flagellin: IM, immunology
Genes, Structural, Bacterial
Polymerase Chain Reaction: MT, methods

RN 12777-81-0 (Flagellin); 156066-56-7 (FlaC protein)

CN 0 (DNA Primers)

L9 ANSWER 4 OF 6 MEDLINE DUPLICATE 3

AN 96387752 MEDLINE
DN 96387752
TI Monoclonal antibodies for detection of the H7 antigen of Escherichia coli.
AU He Y; Keen J E; Westerman R B; Littledike E T; Kwang J
CS U.S. Meat Animal Research Center, U.S. Department of Agriculture, Clay Center, Nebraska 68933, USA.. he@aux.marc.usda.gov
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1996 Sep) 62 (9) 3325-32. Journal code: 6K6. ISSN: 0099-2240.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199612
AB Two murine monoclonal antibodies (MAbs) (2B7 and 46E9-9) reactive with the H7 flagellar antigen of Escherichia coli were produced and characterized. A total of 217 E. coli strains (48 O157:H7, 4 O157:NM, 23 O157:non-H7, 22 H7:non-O157, and 120 non-O157:nonH7), 17 Salmonella serovars, and 29 other gram-negative bacteria were used to evaluate the reactivities of the two MAbs by indirect enzyme-linked immunosorbent assay (ELISA). Both MAbs reacted strongly with all E. coli strains possessing the H7 antigen and with H23- and H24-positive E. coli strains. Indirect ELISA MAb specificity was confirmed by inhibition ELISA and by Western blotting (immunoblotting), using partially purified flagellins from E. coli O157:H7 and other E. coli strains. On a Western blot, MAb 46E9-9 was more reactive against H7 flagellin of E. coli O157:H7 than against H7 flagellin of E. coli O1:K1:H7. Competition ELISA suggested that MAbs 2B7 and 46E9-9 reacted with closely related H7 epitopes. When the ELISA reactivities of the MAbs and two commercially available polyclonal anti-H7 antisera were compared, both polyclonal antisera and MAbs reacted strongly with **E. coli H7** bacteria. However, the polyclonal antisera cross-reacted strongly both with non-H7 E. coli and with many non-E. coli bacteria. The polyclonal antisera also reacted strongly with H23 and H24 E. coli isolates. The data suggest the need to define serotype-specific epitopes among H7, H23, and H24 E. coli flagella. The anti-H7 MAbs described in this report have the potential to serve as high-quality diagnostic reagents, used either alone or in combination with O157-specific MAbs, to identify or detect E. coli O157:H7 in food products or in human and veterinary clinical specimens.
CT Check Tags: Animal
*Antibodies, Monoclonal: IM, immunology
Antibody Specificity
*Antigens, Bacterial: AN, analysis
Cross Reactions
Enzyme-Linked Immunosorbent Assay
*Escherichia coli: IM, immunology
Mice
Mice, Inbred BALB C
Serotyping
CN 0 (Antibodies, Monoclonal); 0 (Antigens, Bacterial)

L9 ANSWER 5 OF 6 MEDLINE DUPLICATE 4
AN 86086289 MEDLINE
DN 86086289
TI H7 antiserum-sorbitol fermentation medium: a single tube screening medium for detecting Escherichia coli O157:H7 associated with hemorrhagic colitis.
AU Farmer J J 3d; Davis B R
SO JOURNAL OF CLINICAL MICROBIOLOGY, (1985 Oct) 22 (4) 620-5.
Journal code: HSH. ISSN: 0095-1137.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198604
AB Escherichia coli serotype O157:H7 has been isolated from outbreaks and sporadic cases of hemorrhagic colitis. There is convincing evidence that it can cause this diarrheal disease. Because of the interest in hemorrhagic colitis, it has become desirable to detect this particular strain in human feces, which usually contains many other strains of E. coli. Two characteristics of the incriminated E. coli O157:H7 strain have made its isolation and identification easier. It does not ferment D-sorbitol rapidly, in contrast to about 95% of other E. coli strains. In addition, the strain has H antigen 7, but only about 10% of other E. coli strains have this particular antigen. To screen for E. coli O157:H7 we devised H7 antiserum-sorbitol fermentation medium (18 g of enteric fermentation base, 10 g of D-sorbitol, 4 g of agar, 10 ml of Andrade indicator, 989 ml of water; all ingredients were mixed, autoclaved, and cooled; 1 ml of **E. coli H7** antiserum was then added). Colonies to be screened were inoculated into this medium. Strains of E. coli O157:H7 gave a characteristic pattern; they did not ferment sorbitol and were immobilized in the semisolid medium because of the reaction of their flagella with the flagella antiserum. Almost all other strains of E. coli gave a different pattern; they fermented sorbitol or were not immobilized by the H7 serum or both. Strains which were presumptive positives (sorbitol negative, H7 positive) were then tested in E. coli O157 serum by slide or tube agglutination.(ABSTRACT TRUNCATED AT 250 WORDS)
CT Check Tags: Human
Agglutination Tests
*Antigens, Bacterial: AN, analysis
Antigens, Bacterial: IM, immunology
*Colitis: MI, microbiology
Culture Media
Escherichia coli: IM, immunology
*Escherichia coli: IP, isolation & purification
Escherichia coli: ME, metabolism
*Escherichia coli Infections: MI, microbiology
False Positive Reactions
*Feces: MI, microbiology
Fermentation
Flagella: IM, immunology
*Gastrointestinal Hemorrhage: MI, microbiology
Immune Sera
*Sorbitol: ME, metabolism
Species Specificity
RN 50-70-4 (Sorbitol)

CN 0 (Antigens, Bacterial); 0 (Culture Media); 0 (H antigen)

L9 ANSWER 6 OF 6 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
AN 85238836 EMBASE
DN 1985238836
TI H7 antiserum-sorbitol fermentation medium: A single tube screening medium for detecting Escherichia coli O157:H7 associated with hemorrhagic colitis.
AU Farmer III J.J.; Davis B.R.
CS Enteric Bacteriology Section, Center for Infectious Diseases, Centers for Disease Control, Atlanta, GA 30333, United States
SO Journal of Clinical Microbiology, (1985) 22/4 (620-625).
CODEN: JCMIDW
CY United States
DT Journal
FS 004 Microbiology
026 Immunology, Serology and Transplantation
048 Gastroenterology
LA English
AB Escherichia coli serotype O157:H7 has been isolated from outbreaks and sporadic cases of hemorrhagic colitis. There is convincing evidence that it can cause this diarrheal disease. Because of the interest in hemorrhagic colitis, it has become desirable to detect this particular strain in human feces, which usually contains many other strains of E. coli. Two characteristics of the incriminated E. coli O157:H7 strain have made its isolation and identification easier. It does not ferment D-sorbitol rapidly, in contrast to about 95% of other E. coli strains. In addition, the strain has H antigen 7, but only about 10% of other E. coli strains have this particular antigen. To screen for E. coli O157:H7 we devised H7 antiserum-sorbitol fermentation medium (18 g of enteric fermentation base, 10 g of D-sorbitol, 4 g of agar, 10 ml of Andrade indicator, 989 ml of water; all ingredients were mixed, autoclaved, and cooled; 1 ml of **E. coli H7** antiserum was then added). Colonies to be screened were inoculated into this medium. Strains of E. coli O157:H7 gave a characteristic pattern; they did not ferment sorbitol and were immobilized in the semisolid medium because of the reaction of their flagella with the flagella antiserum. Almost all other strains of E. coli gave a different pattern; they fermented sorbitol or were not immobilized by the H7 serum or both. Strains which were presumptive positives (sorbitol negative, H7 positive) were then tested in E. coli O157 serum by slide or tube agglutination. The number of strains which were presumptive positive by H7-sorbitol medium but then were not found to be O157 was less than 1%. A second approach has been helpful in deciding which colonies to screen in H7-sorbitol medium. MacConkey-sorbitol agar (22.2 g of MacConkey agar base [which contains no sugar], 10 g of D-sorbitol, 1,000 ml of water) was designed as a plating medium. Stools were plated on MacConkey agar to estimate the number of E. coli colonies and also plated on MacConkey-sorbitol agar to estimate the number of sorbitol-negative colonies of E. coli. These two approaches have proved useful for isolating and identifying E. coli O157:H7 from human feces and from feces of animals infected in the laboratory with this strain. The results suggest that media may be formulated in a similar fashion for detecting other specific strains of E. coli.
CT Medical Descriptors:
*escherichia coli

*fermentation
*h antigen
*ulcerative colitis
culture medium
feces
food
large intestine
priority journal
diagnosis
in vitro study
nonhuman
digestive system
Drug Descriptors:
*sorbitol
shiga toxin
RN (sorbitol) 26566-34-7, 50-70-4, 53469-19-5; (shiga toxin) 75757-64-1

=> s P anaerobius

L10 204 P ANAEROBIUS

=> dup remove l10

PROCESSING COMPLETED FOR L10
L11 91 DUP REMOVE L10 (113 DUPLICATES REMOVED)

=> s l11 and cattle

L12 3 L11 AND CATTLE

=> d l12 all 1-3

L12 ANSWER 1 OF 3 MEDLINE
AN 97076913 MEDLINE
DN 97076913
TI An rRNA approach for assessing the role of obligate amino acid-fermenting bacteria in ruminal amino acid deamination.
AU Krause D O; Russell J B
CS Section of Microbiology, Cornell University, Ithaca, New York 14853, USA.
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (1996 Mar) 62 (3) 815-21. Journal code: 6K6. ISSN: 0099-2240.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199703
EW 19970301
AB Ruminal amino acid degradation is a nutritionally wasteful process that produces excess ruminal ammonia. Monensin inhibited the growth of monensin-sensitive, obligate amino acid-fermenting bacteria and decreased the ruminal ammonia concentrations of **cattle**. 16S rRNA probes indicated that monensin inhibited the growth of Peptostreptococcus anaerobius and Clostridium sticklandii in the rumen. Clostridium aminophilum was monensin sensitive in vitro, but C. aminophilum persisted in the rumen after monensin was added to the diet. An in vitro culture

system was developed to assess the competition of C. aminophilum, **P. anaerobius**, and C. sticklandii with predominant ruminal bacteria (PRB). PRB were isolated from a 10(8) dilution of ruminal fluid and maintained as a mixed population with a mixture of carbohydrates. PRB did not hybridize with the probes to C. aminophilum, **P. anaerobius**, or C. sticklandii. PRB deaminated Trypticase in continuous culture, but the addition of C. aminophilum, **P. anaerobius**, and C. sticklandii caused a more-than-twofold increase in the steady-state concentration of ammonia. C. aminophilum, **P. anaerobius**, and C. sticklandii accounted for less than 5% of the total 16S rRNA and microbial protein. Monensin eliminated **P. anaerobius** and C. sticklandii from continuous cultures, but it could not inhibit C. aminophilum. The monensin resistance of C. aminophilum was a growth rate-dependent, inoculum size-independent phenomenon that could not be maintained in batch culture. On the basis of these results, we concluded that the feed additive monensin cannot entirely counteract the wasteful amino acid deamination of obligate amino acid-fermenting ruminal bacteria.

CT Check Tags: Animal; Female; Support, Non-U.S. Gov't
*Amino Acids: ME, metabolism
Cattle
Clostridium: IP, isolation & purification
*Clostridium: ME, metabolism
Deamination
Fermentation
Monensin: PD, pharmacology
Peptostreptococcus: IP, isolation & purification
*Peptostreptococcus: ME, metabolism
Rumen: ME, metabolism
*Rumen: MI, microbiology
RNA Probes
*RNA, Ribosomal, 16S
RN 17090-79-8 (Monensin)
CN 0 (Amino Acids); 0 (RNA Probes); 0 (RNA, Ribosomal, 16S)

L12 ANSWER 2 OF 3 MEDLINE
AN 93152452 MEDLINE
DN 93152452
TI Phylogeny of the ammonia-producing ruminal bacteria Peptostreptococcus anaerobius, Clostridium sticklandii, and Clostridium aminophilum sp. nov.
AU Paster B J; Russell J B; Yang C M; Chow J M; Woese C R; Tanner R
CS Forsyth Dental Center, Boston, Massachusetts 02115.
NC DE-04881 (NIDCR)
DE-08303 (NIDCR)
SO INTERNATIONAL JOURNAL OF SYSTEMATIC BACTERIOLOGY, (1993 Jan) 43 (1) 107-10.
Journal code: AWO. ISSN: 0020-7713.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
OS GENBANK-L04166; GENBANK-L04168; GENBANK-L04167; GENBANK-M59107; GENBANK-M59084; GENBANK-M23927; GENBANK-M26494; GENBANK-M59090; GENBANK-M59083; GENBANK-M23929; GENBANK-M59095
EM 199305
AB In previous studies, gram-positive bacteria which grew rapidly with

peptides or an amino acid as the sole energy source were isolated from bovine rumina. Three isolates, strains C, FT (T = type strain), and SR, were considered to be ecologically important since they produced up to 20-fold more ammonia than other ammonia-producing ruminal bacteria. On the basis of phenotypic criteria, the taxonomic position of these new isolates was uncertain. In this study, the 16S rRNA sequences of these isolates and related bacteria were determined to establish the phylogenetic positions of the organisms. The sequences of strains C, FT, and SR and reference strains of Peptostreptococcus anaerobius, Clostridium sticklandii, Clostridium coccoides, Clostridium aminovalericum, Acetomaculum ruminis, Clostridium leptum, Clostridium lituseburense, Clostridium acidiurici, and Clostridium barkeri were determined by using a modified Sanger dideoxy chain termination method. Strain C, a large coccus purported to belong to the genus Peptostreptococcus, was closely related to **P. anaerobius**, with a level of sequence similarity of 99.6%. Strain SR, a heat-resistant, short, rod-shaped organism, was closely related to C. sticklandii, with a level of sequence similarity of 99.9%. However, strain FT, a heat-resistant, pleomorphic, rod-shaped organism, was only distantly related to some clostridial species and **P. anaerobius**. On the basis of the sequence data, it was clear that strain FT warranted designation as a separate species. The closest known relative of strain FT was C. coccoides (level of similarity, only 90.6%). Additional strains that are phenotypically similar to strain FT were isolated in this study.(ABSTRACT TRUNCATED AT 250 WORDS)

CT Check Tags: Animal; Comparative Study; Female; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
*Ammonia: ME, metabolism
Cattle
*Clostridium: CL, classification
Clostridium: IP, isolation & purification
*Clostridium: ME, metabolism
Molecular Sequence Data
*Peptostreptococcus: CL, classification
Peptostreptococcus: IP, isolation & purification
*Peptostreptococcus: ME, metabolism
Phylogeny
*Rumen: MI, microbiology

RN 7664-41-7 (Ammonia)

L12 ANSWER 3 OF 3 BIOSIS COPYRIGHT 2001 BIOSIS
AN 2000:450419 BIOSIS
DN PREV200000450419
TI The isolation, characterization and enumeration of hyper-ammonia producing ruminal bacteria.
AU Russell, J. B. (1); Rychlik, J. L.
CS (1) Department of Microbiology, Cornell University, Ithaca, NY, 14853 USA
SO Asian-Australasian Journal of Animal Sciences, (July, 2000) Vol. 13, No. Special Issue, pp. 121-127. print.
ISSN: 1011-2367.
DT Article
LA English
SL English
AB Ruminal amino acid deamination is a wasteful process that often produces

more ammonia than bacteria can utilize. Some carbohydrate-fermenting ruminal bacteria can deaminate amino acids, but these species have specific activities of ammonia production that are lower than mixed ruminal bacteria. In the 1980's and 1990's, bacteria that could not utilize carbohydrates were isolated from the rumen, and these bacteria could deaminate amino acids at a very rapid rate and grow rapidly on peptides and amino acids. Based on 16S RNA sequences, the American isolates were identified as Peptostreptococcus anaerobius, Clostridium sticklandii, and Clostridium aminophilum. New Zealand workers recently isolated a bacterium phylogenetically similar to **P. anaerobius**, but other isolates were more closely related to Peptostreptococcus asaccharolyticus, Eubacterium nodatum and Fusobacterium necrophorum. Mixed ruminal bacteria from **cattle** fed grain produced ammonia half as fast as bacteria from **cattle** fed hay, and a mathematical model predicted that grain-fed **cattle** would have fewer hyper-ammonia producing bacteria than hay-fed **cattle**. When mixed bacteria from **cattle** fed hay were incubated at acidic pH, the ammonia production decreased, and some hyper-ammonia producing bacteria are sensitive to acidic pH. Most hyper-ammonia producing bacteria are monensin sensitive, and monensin decreased the ruminal ammonia concentration of **cattle** fed hay. However, C. aminophilum grows with relatively high concentrations of monensin in vitro, and 16S rRNA probes indicated that monensin (350 mg/day) did not eliminate this bacterium from the rumen. Hyper-ammonia-producing bacteria are nutritionally detrimental, and additional avenues are needed to decrease their numbers in the rumen.

CC Animal Production - Feeds and Feeding *26504
Biochemical Studies - General *10060
Biochemical Studies - Proteins, Peptides and Amino Acids *10064
Biochemical Studies - Carbohydrates *10068
Metabolism - General Metabolism; Metabolic Pathways *13002
Nutrition - General Studies, Nutritional Status and Methods *13202
Digestive System - Physiology and Biochemistry *14004
Reproductive System - Physiology and Biochemistry *16504
Animal Production - General; Methods *26502
Animal Production - Breeds and Breeding *26506
Physiology and Biochemistry of Bacteria *31000

BC Bacteria - General Unspecified 05000
Bacteroidaceae 06901
Gram-Positive Cocci 07700
Endospore-forming Gram-Positives 07810
Irregular Nonsporing Gram-Positive Rods 08890

IT Major Concepts
Animal Husbandry (Agriculture); Metabolism; Nutrition

IT Parts, Structures, & Systems of Organisms
rumen: digestive system

IT Chemicals & Biochemicals
16S RNA; 16S rRNA probe; amino acids: deamination; ammonia: production;
carbohydrate: fermentation; monensin; peptides

IT Methods & Equipment
16S RNA sequencing: analytical method, molecular genetics method;
hyper-ammonia bacteria production model: mathematical model

IT Miscellaneous Descriptors
grain: animal feed; hay: animal feed; pH

ORGN Super Taxa

Artiodactyla: Mammalia, Vertebrata, Chordata, Animalia; Bacteria: Microorganisms; Bacteroidaceae: Anaerobic Gram-Negative Rods, Eubacteria, Bacteria, Microorganisms; Endospore-forming Gram-Positives:
Eubacteria, Bacteria, Microorganisms; Gram-Positive Cocci: Eubacteria, Bacteria, Microorganisms; Irregular Nonsporing Gram-Positive Rods: Actinomycetes and Related Organisms, Eubacteria, Bacteria, Microorganisms

ORGN Organism Name
Clostridium aminophilum (Endospore-forming Gram-Positives); Clostridium sticklandii (Endospore-forming Gram-Positives); Eubacterium nodatum (Irregular Nonsporing Gram-Positive Rods); Fusobacterium necrophorum (Bacteroidaceae); Peptostreptococcus anaerobius (Gram-Positive Cocci); Peptostreptococcus asaccharolyticus (Gram-Positive Cocci); hyper-ammonia producing bacteria (Bacteria); ruminant (Artiodactyla)

ORGN Organism Superterms
Animals; Artiodactyls; Bacteria; Chordates; Eubacteria; Mammals; Microorganisms; Nonhuman Mammals; Nonhuman Vertebrates; Vertebrates

RN 7664-41-7 (AMMONIA)
17090-79-8 (MONENSIN)

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---Logging off of STN---

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Executing the logoff script...

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FULL ESTIMATED COST	52.36	52.51

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.18	-1.18

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